

REMARKS

Favorable reconsideration of this application is respectfully requested in view of the claim amendments and following remarks.

By virtue of the amendments above, Claims 1-3, 7, 9-14, 16, 17, and 22-24 have been amended and Claims 8 and 15 have been canceled without prejudice or disclaimer of the subject matter contained therein. Accordingly, Claims 1-7, 9-14, and 16-24 are pending in the present application, of which Claims 1, 10, and 16 are independent.

No new matter has been introduced by way of the claim amendments; entry thereof is therefore respectfully requested.

Requirement for Information

The Official Action asserts that the Applicant and the assignee of the present application are required under 37 C.F.R. 1.105 to provide information that the Examiner has determined is reasonably necessary to the examination of the present application. The Official Action has, more particularly, requested information regarding whether there exists any applications that claim the benefit of or priority to the present application. This request appears to have been made by the Examiner without any justification for the request and thus, the request appears to be improper. The Applicants, nevertheless, respond to the request as follows.

With regard to the interrogatories, at the time of this response, the Applicant and the assignee are unaware of any application that claims the benefit of or priority to the present application (Serial No. 10/675,943). Accordingly, interrogatories 2-6 are considered moot.

In fact, all of the documents considered to be relevant to the present application have already been cited in the Information Disclosure Statements filed on February 9, 2004 and August 8, 2005.

Drawings

The Official Action asserts that the details of Figures 7a-7c, 8a-8b, 13a-13c, 14a-14d, 15, 16a-16d, and 17a-17d appear to be unclear and that it is thus difficult to accurately ascertain the features depicted in those figures. Attached to the present response are Replacement Sheets of Figures 7a-7c, 8a-8b, 13a-13c, 14a-14d, 15, 16a-16d, and 17a-17d, which more clearly depict the intended features in those figures. The Examiner should be aware, however, that the images are prone to deteriorate when reproduced and that absolutely clear details are nearly impossible to replicate in patent drawings and that therefore, the requirement of absolutely clear photographic representations is an undue burden.

Also attached hereto are Replacement Sheets of Figures 1a and 1b, which replaces the handwritten symbols with Arabic symbols consistent with the Specification.

For at least the foregoing reasons, the Examiner is respectfully requested to withdraw the objections to the drawings.

Specification

The Official Action sets forth a number of objections to the Specification. In setting forth the objections, the Official Action cites to paragraph numbers that were not included in the originally filed application. As such, the Official Action has based the objections on the text contained in U.S. Patent Application Publication Serial Number 2005/0073702

(hereinafter "the Publication"), which is the published version of the present application. More particularly, the Official Action has cited to text version and not to the actual publication. In doing so, however, the Official Action has pointed out a number of errors contained in the text version of the Publication that were not contained in the originally filed specification. In other words, the originally filed application does not contain many of the errors cited in the Official Action. In fact, the text versions of U.S. Patent Publications generally contain errors that are not found in the originally filed application or the actual pdf version of the Publications.

For instance, in the paragraph beginning on page 10, line 23, which corresponds to paragraph 64 of the Publication, there is no "0110". In addition, the paragraphs corresponding to paragraphs 65, 73, and 78 in the Publication do not contain the errors alleged in the Official Action. Accordingly, many of the alleged errors set forth in the Official Action are inapplicable to the application as filed.

For those paragraphs containing the errors alleged in the Official Action, appropriate corrections have been made. For instance, in the paragraphs corresponding to paragraphs 126-128 in the Publication, references to Figure 17 have been changed to Figures 17a-17d.

Information Disclosure Statement

The indication that the documents cited in the Information Disclosure Statements submitted on Information Disclosure Statements filed on February 9, 2004 and August 8, 2005 have been considered is noted with appreciation.

Claim Rejection Under 35 U.S.C. §101

The Official Action sets forth a rejection of Claims 1-24 as allegedly being directed to non-statutory subject matter. This rejection is respectfully traversed for at least the foregoing reasons.

Claims 1-7 and 9

The assertion that the term “processor” are defined only by mathematical terms and is therefore directed to non-statutory subject matter is improper. Instead, it is submitted that the “input processor”, the “Retinex-type processor”, the “local statistics processor”, the “point operation processor”, and the “output processor” pertain to physical electronic components, such as, microprocessors configured to perform various functions. In other words, the claimed “processors” comprise circuits designed and configured to perform the functions claimed in Claim 1. For instance, the “processors” may comprise circuitry in a digital camera or other device capable of capturing or receiving an image.

Accordingly, it is respectfully submitted that Claims 1-7 and 9 are directed to statutory subject matter and the Examiner is requested to withdraw the rejection of Claims 1-7 and 9.

Claims 10-14

Claims 10-14 have been amended to be directed to “an apparatus for fast Retinex processing”. The apparatus may also comprise circuitry in a digital camera or other device capable of capturing or receiving an image.

Accordingly, it is respectfully submitted that Claims 10-14 are directed to statutory subject matter and the Examiner is requested to withdraw the rejection of Claims 10-14.

Claims 16-24

The assertion that the claimed “filters” are merely mathematical algorithms which render the claims non-statutory is improper and should be withdrawn. The “filters” have been removed from Claims 16-24.

Accordingly, it is respectfully submitted that the rejection of Claims 16-24 is now considered moot and should thus be withdrawn.

Claim Rejection Under 35 U.S.C. §112, second paragraph

The Official Action sets forth rejections of Claims 1-24 as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These rejections are respectfully traversed for the following reasons.

The preamble of Claim 1 has been amended to recite “a color image” and the term “image” has been amended to recite “the color image” in line 2. This change has also been made in Claim 3.

Claim 2 has been amended to provide definitions for the requested terms.

With regard to Claim 6, it is not at all understood as to why the Official Action is requiring correction to “the published version of the claim” if the originally filed claim does not contain the asserted error. Clearly, the Examiner has improperly based this rejection on the text version of the Publication and not to the filed specification. In fact, the undersigned

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is unaware of any method available to correct published versions of patent applications.

Accordingly, the Examiner is respectfully requested to withdraw the rejection of Claim 6.

Claims 8 and 15 have been canceled without prejudice or disclaimer of the subject matter contained therein and thus, the rejections of Claims 8 and 15 are now considered moot.

Claim 9 has been amended to depend upon Claim 2 and the claimed "scaled gradient" is now related to the previously introduced "scaled gradient".

Claims 10 and 16 have been amended to include definitions of the variables recited therein. However, it is unclear from where in Claims 10 and 16 an apostrophe is to be removed because the originally filed Claims 10 and 16 do not include an apostrophe.

The rejections of Claims 22-24 are now considered moot at least by virtue of the amendments to Claim 16 to include the various compass notations.

As all of the rejections under 35 U.S.C. § 112, second paragraph, have either been overcome, the Examiner is respectfully requested to withdraw these rejections.

Claim Rejection Under 35 U.S.C. § 102

The test for determining if a reference anticipates a claim, for purposes of a rejection under 35 U.S.C. § 102, is whether the reference discloses all the elements of the claimed combination, or the mechanical equivalents thereof functioning in substantially the same way to produce substantially the same results. As noted by the Court of Appeals for the Federal Circuit in *Lindemann Maschinenfabrick GmbH v. American Hoist and Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984), in evaluating the sufficiency of an anticipation rejection under 35 U.S.C. § 102, the Court stated:

Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.

Therefore, if the cited reference does not disclose each and every element of the claimed invention, then the cited reference fails to anticipate the claimed invention and, thus, the claimed invention is distinguishable over the cited reference.

Claims 1, 8, and 15 have been rejected under 35 U.S.C. §102(a) as allegedly being unpatentable over the disclosure contained in WO 02089062 to Kimmel et al. For at least the following reasons, it is respectfully submitted that this rejection is clearly improper and should be withdrawn.

Initially, Claims 8 and 15 have been canceled without prejudice or disclaimer of the subject matter contained therein. Accordingly, the rejection of Claims 8 and 15 are now considered moot.

In addition, independent Claim 1 has been amended to include, *inter alia*, that the apparatus for processing a color image includes an input processor configured to receive the color image, a Retinex-type processor having a local statistics processor comprising a cascaded recursive filter and a point operation processor configured to correct pixels of the input color image, and an output processor configured to transform the corrected pixels into an output signal that is indexed to represent an intensity of a particular position in the color image. Support for the amendments made to Claim 1 may at least be found in the paragraph beginning on line 14 of page 8 of the Specification.

The Official Action asserts that the iterative estimator 104 depicted in Figure 2 of Kimmel et al. is equivalent to a Retinex-type processor comprising a local statistics processor having a cascaded recursive filter. This assertion is improper because the iterative estimator

104 cannot reasonably be construed as being equivalent to the claimed local statistics processor having a cascaded recursive filter. As is generally known to those of ordinary skill in the art of signal processing and defined in Wikipedia.org, “a recursive filter is a type of filter which re-uses one or more of its outputs as an input.” In addition, as described on page 11, lines 1-5 of the Specification, a cascade of recursive filters are used to avoid saturation of the reflectance R.

In contrast, Kimmel et al. discloses that the iterative estimator 104 “uses a Projected Normal Steepest Descent or similar algorithm, with multi-resolution processing to compute an estimate 107 of the illumination”. As such, Kimmel et al. does not appear to disclose that the iterative estimator 104 includes a local statistics processor having a cascaded recursive filter as claimed in Claim 1 of the present invention.

For at least the foregoing reasons, it is respectfully submitted that Kimmel et al. fails to disclose each and every element claimed in independent Claim 1 of the present invention and therefore cannot anticipate this claim. The Examiner is therefore respectfully requested to withdraw this rejection and to allow Claim 1 and the claims that depend therefrom.

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Conclusion

In light of the foregoing, withdrawal of the rejections of record and allowance of this application are earnestly solicited.

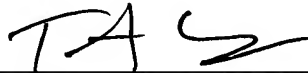
Should the Examiner believe that a telephone conference with the undersigned would assist in resolving any issues pertaining to the allowability of the above-identified application, please contact the undersigned at the telephone number listed below.

Please grant any required extensions of time and charge any fees due in connection with this request to deposit account no. 08-2025.

Respectfully submitted,

Dated: December 28, 2007

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